

Attachment 2

Table 1/Typical properties of EPON® Resin 9405/EPI-CURE® 9470 Curing Agent at various cure temperatures, times and mix ratios

	MDT 264 psi °F		Tensile Strength ksi		Tensile Modulus ksi		Tensile Elongation %	
Mix ratio EPON® Resin 9405/ EPI-CURE® 9470 Curing Agent	100	100	100	100	100	100	100	100
	28	37	28	37	28	37	28	37
4 hour cure at								
250 °F ¹	252	261	8.6	11.2	422	410	2.5	7.5
275 °F ¹	286	288	12.2	11.8	403	355	6.7	10.7
300 °F	307	261	9.3	11.5	386	407	3.8	8.2
8 hour cure at								
250 °F ¹	277	286	11.7	10.9	429	396	5.3	8.9
275 °F ¹	304	271	11.8	11.6	419	357	5.8	9.0
300 °F	329	264	11.1	11.4	401	404	5.5	9.1

¹Castings cured at 250 °F and 275 °F were cured 1 hour at 212 °F before taken to temperature.

Dynamic mechanical analysis (DMA) profiles for EPON Resin 9405/EPI-CURE 9470 Curing Agent are available upon request.

Table 2/Comparison of neat resin properties for EPON® Resin 9405/EPI-CURE® 9470 Curing Agent (28 and 37 phr) and TGMDA/DDS (49.6 phr)

	EPON Resin 9405/ EPI-CURE 9470 Curing Agent ¹ (28 phr)	EPON Resin 9405/ EPI-CURE 9470 Curing Agent ¹ (37 phr)	TGMDA/DDS ²
T _g , dry, °F	358	297	507
T _g , wet, °F	333		329
Moisture gain, ³ % wt	1.17	1.31	7.5
→ Density, cured, g/cc	1.161	1.158	
→ Tensile strength, ksi	11.3	11.7	8.5
Tensile modulus, ksi	413	427	542
Tensile ultimate strain, %	6.2	8.5	1.8
Flexural strength, ksi	15.8	18.3	17
Flexural modulus, ksi	411	448	560

¹Cure schedule - 1 hour at 176 °F, 1 hour at 250 °F, 1 hour at 300 °F, 4 hours at 350 °F.

²Cure schedule - 2 hours at 300 °F, 4 hours at 392 °F.

³EPON Resin 9405/EPI-CURE 9470 Curing Agent - 3 day soak at 200 °F; TGMDA/DDS - 2 week soak at 200 °F.

Neat resin system properties

Accelerated

The cure behavior of the EPON Resin 9405/EPI-CURE 9470 Curing Agent system may be adjusted using EPI-CURE Curing Agent Accelerator 537. This material will increase the rate of cure while maintaining a long room temperature working time, low mix viscosity, and material properties. The following figures show the effect of accelerator on neat resin properties.